Amendments to the Specification

Please replace the paragraph that begins on page 13, line 13, and ends on page 14, line 23, with the following paragraph:

Promoter. A DNA sequence generally described as the 5' region of a gene, located proximal to the start codon. The transcription of an adjacent gene(s) is initiated at the promoter region. If a promoter is an inducible promoter, then the rate of transcription increases in response to an inducing agent. In contrast, the rate of transcription is not regulated by an inducing agent if the promoter is a constitutive promoter. According to the invention, preferred promoters are heterologous to the AD7c-NTP gene, that is, the promoters do not drive expression of the gene in a human. Such promoters include the CMV promoter (InVitrogen, San Diego, CA), the SV40, MMTV, and hMTIIa promoters (U.S. 5,457,034), the HSV-1 4/5 promoter (U.S. 5,501,979), and the early intermediate HCMV promoter (WO92/17581). Also, it is preferred that the promoter is neuro-specific, that is, it is induced selectively in neuronal tissue. Also, neuro-specific enhancer elements may be employed. Examples of neuro-specific promoters include but are not limited to the promoter which controls the neurofilament gene (WO91/02788; Byrne and Ruddle, *Proc. Natl. Acad. Sci. USA 86*:5473-5477 (1989)), the neuron specific promoter of the human neurofilament light gene (NFL) (U.S. 5,569,827); the promoter of the β2-subunit of the neuronal nicotinic acetylcholine receptor (EP 0 171 105; U.S. appl. no. 08/358,627 (patented,

U.S. Pat. No. 6,177,242)), the hThy-1 promoter (WO95/03397; U.S. appl. no. 08/096,944 (abandoned); Gordon, J. *et al.*, *Cell 50*:445-452 (1987)); the Tα1 α-tubulin promoter (WO95/25795; U.S. appl. no. 08/215,083 (patented, U.S. Pat. No. 5,661,032); Gloster *et al.*, *J. Neurosci. 14*:7319-7330 (1994)), the APP promoter, the rat neuron specific promoter, the human β actin gene promoter, the human platelet derived growth factor B (PDGF-B) chain gene promoter, the rat sodium channel gene promoter, the mouse myelin basic protein gene promoter, the human copper-zinc superoxide dismutase gene promoter, mammalian POU-domain regulatory gene promoter (WO93/14200; U.S. appl. nos. 07/817,584 (abandoned) and 07/915,469 (abandoned)); human platelet derived growth factor B (PDGF-B) chain gene promoter (WO96/40895; U.S. appl. nos. 08/486,018 (abandoned) and 08/486,538 (abandoned); Sasahara *et al.*, *Cell 64*:217-227 (1991)); and the neuron-specific enolase promoter (McConlogue *et al.*, *Aging 15*:S12 (1994); Higgins *et al.*, *Ann Neurol. 35*:598-607 (1995); Mucke *et al.*, *Brain Res. 666*:151-167 (1994); Higgins *et al.*, *Proc. Natl. Acad. Sci USA 92*:4402-4406 (1995); WO96/40896; U.S. appl. no. 08/480,653 (abandoned); and U.S. 5,387,742); and sequences that regulate the oligodendroglial-specific expression of JC virus, glial-specific expression of the proteolipid protein, and the glial fibrillary acidic protein genes (U.S. Patent No. 5,082,670). Other neuro-specific promoters will be readily apparent to those of skill in the art. Since protein phosphorylation is critical for neuronal regulation (Kennedy, "Second Messengers and Neuronal Function," in *An Introduction*

to Molecular Neurobiology, Hall, Ed., Sinauer Associates, Inc. (1992)), protein kinase promoter sequences can be used to achieve sufficient levels of NTP gene expression.

Please replace the paragraph that begins on page 20, line 1, and ends on page 20, line 25, with the following paragraph:

The invention also relates to transgenic non-human animals which comprise the DNA construct of the invention in each of its germ and somatic cells and which over express AD7c-NTP. Such transgenic animals may be obtained, for example, by injecting the DNA construct of the invention into a fertilized egg which is allowed to develop into an adult animal. To prepare a transgenic animal, a few hundred DNA molecules are injected into the pro-nucleus of a fertilized one cell egg. The micro injected eggs are then transferred into the oviducts of pseudopregnant foster mothers and allowed to develop. It has been reported by Brinster *et al.*, *Proc. Natl. Acad. Sci. USA* *82*:4438-4442 (1985), that about 25% of mice which develop will inherit one or more copies of the micro injected DNA. Alternatively, the transgenic animals may be obtained by utilizing recombinant ES cells for the generation of the transgenes, as described by Gossler *et al.*, *Proc. Natl. Acad. Sci. USA* *83*:9065-9069 (1986). The offspring may be analyzed for the integration of the transgene by isolating genomic DNA from tail tissue and the fragment coding for AD7c-NTP identified by conventional DNA-hybridization

techniques (Southern, *J. Mol. Biol. 98*:503-517 (1975)). Animals positive for the AD7c-NTP gene are further bred to expand the colonies of AD7c-NTP mice. General and specific examples of methods of preparing transgenic animals are disclosed in U.S. 5,602,299, 5,366,894, 5,464,758, 5,569,827, WO96/40896 (U.S. appl. no. 08/480,653 (abandoned)); WO96/40895 (U.S. appl. nos. 08/486,018 (abandoned) and ~~08/486,536~~ 08/486,538 (abandoned)); WO93/14200 (U.S. appl. nos. 07/817,584 (abandoned) and 07/915,469 (abandoned)); WO95/03397 (U.S. appl. no. 08/096,944 (abandoned)); WO95/25792 (U.S. appl. no. 08/215,083 (patented, U.S. Pat. No. 5,661,032)); EP 0 717 105 (U.S. appl. no. 08/358,627 (patented, U.S. Pat. No. 6,177,242)); and Hogan *et al.*, Manipulating the Mouse Embryo, Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1986); Hammer *et al.*, *Cell 63*:1099-1112 (1990).

Please replace the paragraph that begins on page 21, line 20, and ends on page 21, line 29, with the following paragraph:

In a preferred embodiment, the host is a transgenic animal. In another preferred embodiment, the host is a cell *in vitro*. The suppression or prevention of expression, and the increased degradation of the protein such as AD7c-NTP may be detected with antibodies specific for AD7c-NTP. Monoclonal and polyclonal antibodies which are specific for AD7c-NTP as well as methods for the qualitative and quantitative detection of AD7c-NTP

are described herein as well as in WO94/23756 and U.S. appl. no. 08/340,426 (patented, U.S. Pat. No. 5,948,634). Such testing may be carried out on CSF of the transgenic animal or by immunohistochemical staining of a tissue section from the brain of the animal. In addition, such testing may be carried out by Western blot analysis, ELISA or RIA.